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HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
SUBCOMMITTEE ON AVIATION ON THE FEDERAL AVIATION
ADMINISTRATION'S OVERSIGHT OF ON-DEMAND AIRCRAFT OPERATIONS.
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Chairman Costello, Ranking Member Petri, Members of the Subcommittee:

Thank you for inviting me here today to discuss Federal Aviation Administration (FAA)

oversight of on-demand aircraft operations. It is essential to any discussion regarding the

safety and oversight of on-demand operations to define the nature and scope of those

operations. Today, I would like to begin by doing that, in order to provide the

appropriate context for our current oversight, our plans for an even more data-driven,

systemic, risk-based oversight of these operations and actions we have taken to improve

safety.

On-Demand Operations

On-demand operations are conducted under part 135 and consist of unscheduled

operations conducted on aircraft that are smaller than those which are typically used in

scheduled commercial service. On-demand operations typically involve non-scheduled

flights in rotorcraft or small aircraft – aircraft with 30 seats or less – or all-cargo

operations in rotorcraft or aircraft of comparable size. Typically, customers who use on-

demand operators select the operator and then may negotiate all other relevant aspects of

the flight including the type and size of aircraft, the date and time of departure, and the

destination. Each flight can carry no more than 30 passengers, but often carries as few as

one passenger per flight.

It is vital to any discussion of on-demand operations to understand the variety and uniqueness of each segment of such operations, especially as compared to part 121 operations. Generally, part 121 operators provide passenger and cargo service in jet aircraft or in large turboprops. They typically operate highly automated aircraft, at high en route altitudes (above terrain and weather), under instrument flight rules (IFR), with full air traffic control services, and to and from airports that meet strict FAA certification requirements.

Much like "general aviation" however, "on-demand" captures a collection of specific types of operations. The range of on-demand activities includes air tours, helicopter air ambulance service, off-shore energy operations shuttling workers to and from facilities in the Gulf of Mexico, all-cargo operations, service to isolated markets such as Alaska, business jet operations and "traditional" passenger service, as described below. This range of operations spans a wide array of activities and operating conditions.

Type of On-Demand Operation	Characteristics
Air Tours	mostly helicopter operations; daytime visual flight rules (VFR), low altitude; off-airport; key markets dominated by marine or mountainous environments (Hawaii, Alaska and the Grand Canyon region)
Helicopter Air Ambulance	low-altitude; helicopters; VFR; considerable night-flying; weather issues; off-airport sites
Off-Shore Energy	historically limited IFR support; helicopters; weather issues; marine environment; challenging landing sites
Cargo	single-engine aircraft, with some twins and some business jets; dominated by sub-contractors to major cargo airlines, check-haulers, and the Alaska market; VFR and substantial night flying
Alaskan Operations	dominated by small, single-engine helicopters and airplanes, including a large fleet of float planes; operations to-from isolated markets; extensive off-airport operations; weather and climate issues; terrain
Business Jet Market	IFR system; airport-to-airport; very different profile from other on-demand operations and a safety record that is comparable to that of part 121 operators
"Traditional" passenger service	wide range of fleets and operating environments, but most prevalent in Alaska; jets or capable turboprops used in the Lower 48
Other	some heavy lift, some survey, photography, etc., dominated by light airplanes and light helicopters in low-level operations

Also, unlike part 121 operations, on-demand flights are conducted to meet a particular customer's specific need for transportation that cannot be met by operators in scheduled service. On-demand customers typically seek transportation to reliever airports, off-airport sites, transportation with little or no notice, or transportation to or within remote areas. For example, a customer may wish to fly on an on-demand business jet to a reliever airport with minimal scheduled service, because of its proximity to the location of the passenger's business or because the closest major airport does not offer scheduled service that meets his or her business needs. Helicopter air ambulance operators respond to medical needs that are not predictable in terms of time, frequency, or even location. Remote villages in Alaska and even some in the continental United States may have short runways or even gravel landing strips. Thousands of energy workers along with their supplies must make daily trips to and from work on oil platforms in the Gulf of Mexico. These are important operations, but they are not suitable to be conducted under part 121.

On-demand operators would not be able to meet the needs they serve without the current regulatory flexibility. Operators offering scheduled commercial service do not serve certain airports due to insufficient passenger demand. Scheduled operators are also not permitted to go to certain locations because those operators must operate in and out of airports with runways that have certain facilities and characteristics that a gravel strip outside of a northwestern Alaskan village, an oil rig in the Gulf, or a hospital rooftop do not have.

The diversity of on-demand operations leads to an accident profile that is very different from that for part 121 operations. For example, for the period between FY 2002 and January 2010, 7 percent of on-demand accidents occurred in jets but 82 percent of part 121 accidents occurred in jets. During this same period, 14 percent of on-demand accidents occurred during operations to support off-shore oil but no part 121 accidents occurred in this market. These percentages show that, given the diversity in markets, the equipment that serves those markets, and the environments in which that equipment operates, a comparison between part 121 accidents and on-demand accidents does not provide a basis from which accurate safety assessments can be made. In contrast, if we were to compare on-demand operations over time, we would see a definite decline in the number of accidents due to the combined efforts of the FAA and the industry.

Oversight

On-demand operations present oversight challenges as unique as the operations themselves - the operations may be seasonal or sporadic, or the base of operations may be remote. Our inspectors meet these oversight challenges by using their expertise and experience with their assigned operators to plan their oversight activities. This approach ensures that all on-demand operators are meeting the standards of part 135 and allows inspectors sufficient flexibility to monitor risks that may be associated with the attributes of a particular type of on-demand certificate holder.

FAA oversight of on-demand air carriers consists of a national work plan entitled the National Program Guidelines (NPG), comprised of a baseline set of required inspections for each carrier. For example, inspectors conduct oversight of the operators' bases of

operation, records, training programs, and check airman programs on an annual basis.

The required inspections are revised periodically to address risks identified by a variety

of sources including surveillance data analyzed in the Safety Performance Analysis

System (SPAS) during previous years' inspections. For example, for the 2010 work plan

we added an inspection of an on-demand operator's procedures to conduct pilot records

checks required by the Pilot Records Improvement Act.

The baseline, or required inspections, account for only 10-15 percent of an inspector's

overall workload. Our national work plan requires the baseline inspections to be

supplemented by a set of planned inspections, through which we expect the majority of

oversight to occur. The planned inspection portion of our oversight is designed by FAA

safety inspectors at the local level. Inspectors develop a planned inspection program for

their assigned carriers based on both a safety assessment, using surveillance data

contained in SPAS, and their expert evaluation of perceived risk for each of the operators

they oversee. Further, inspectors are expected to modify planned inspection programs to

account for risk areas they identify throughout the year.

Our current oversight program also includes the Surveillance Priority Index (SPI). The

SPI is used by principal inspectors and regional offices to prioritize surveillance of the

part 135 operators they oversee. The SPI allows the ranking of part 135 operators based

on various risk factors and principal inspector input. The SPI tool creates a ranked order

of assessed safety risks, which, together with an inspector's knowledge of the operator,

become the basis for prioritizing planned inspections. This tool assists inspectors in

prioritizing surveillance for their part 135 operators. The SPI tool allows the FAA to

leverage resources efficiently, focusing attention and surveillance where it is most

needed.

We agree with the Department of Transportation Inspector General's recommendation

that the use of the SPI should be mandatory, and we are in the process of revising the

agency order that directs the oversight activities of FAA's on-demand aviation safety

inspectors to include a specific requirement to use the SPI tool. I expect the revision to

be complete before the end of the fiscal year. This revision will affect how an inspector

who does not already use the SPI tool executes planned inspections and will be applicable

to the work plan for next year's required inspections. In the meantime, I can report that

71 percent of our part 135 certificate management teams are already using SPI.

Additionally, SPI has served successfully as a model for the development of operation-

specific safety initiatives. In Alaska, for example, we developed the part 135

Surveillance and Evaluation Program (SEP), to more effectively oversee small air carriers

with higher accident rates. The SEP is comprised of two parts – the safety evaluation and

risk assessment phase, and risk-based targeting of surveillance. The evaluation process

provides an in-depth analysis of identified risks to determine root causes and correct

systemic weaknesses. The data analyzed includes past surveillance activities, accident

and incident events, enforcement history and the economic stability of an operator. The

surveillance process is designed to target the surveillance work program on identified

risks within a particular operator. Although we have not mandated SEP nationwide, it is

used by inspectors in the oversight of all multi-pilot 135 certificate holders in Alaska and,

in some cases, by inspectors in the continental United States who oversee large part 135 operators and air ambulance or air tour operators.

Although current FAA oversight processes have contributed to an outstanding safety record, we continue to look for ways to make the system ever safer and anticipate future needs and challenges. We are optimizing FAA's oversight resources for on-demand operations to best target risk areas. We acknowledge that a more structured data-driven risk-based oversight system for all commercial operations is necessary. This is why we are developing the Flight Standards Safety Assurance System (SAS). While work on this new system is underway, the SPI tool and SEP will move us further toward our safety goals.

Once it is complete, the SAS will cover all commercial operations ranging from part 121 air carriers to on-demand operations. Under the SAS, part 135 operators will receive the same type of data driven surveillance as part 121 operators. The SAS will use hazard identification and risk assessment strategies to formulate surveillance plans and target FAA resources. We expect the SAS to be implemented at the end of 2013.

Safety

We acknowledge that the accident rate for on-demand operations is higher than that for 121 scheduled operations, and our safety professionals are constantly striving to make every air operation the safest as possible. For this reason, we formed an Aviation Rulemaking Committee to review part 135 regulations, and provide recommendations for

improvements. They provided us with over 100 recommendations in such areas as training, cabin safety and equipment, the majority of which we concur with.

One recent example of our work on the ARC recommendations is crew resource management (CRM) training. CRM focuses on communication and interactions among pilots, flight attendants, operations personnel, maintenance personnel, air traffic controllers, flight service stations, and others. CRM also focuses on single pilot communications, decision making, and situational awareness. This training is tailored to individual operators or types of operations and helps to prevent errors such as runway incursions, misinterpreting information from air traffic controllers, crewmembers' loss of situational awareness, and crewmembers failing to fully prepare for takeoff or landing. This is why we are in the process of rulemaking to require CRM for all part 135 operators.

In the interim, we have taken targeted action through a variety of avenues. Earlier this year, the FAA began using a satellite-based system, Automatic Dependent Surveillance-Broadcast (ADS-B), to more efficiently and safely separate and manage aircraft operations over the Gulf of Mexico and other off-shore facilities. Aircraft flying over the Gulf now know where they are in relation to bad weather. We have every reason to believe that ADS-B technology will result in significant safety enhancements in the Gulf. After the FAA established an ADS-B prototype in Alaska, outfitting numerous general aviation aircraft with ADS-B avionics, the improved situational awareness for pilots and the extended coverage for controllers resulted in a 47 percent dip in the fatal accident rate for equipped aircraft.

Improvements in technology alone cannot be the only efforts to lower the on-demand

accident rate. While technology such as ADS-B has provided tremendous safety benefits

for Alaska, the Alaska aviation community has also instituted education and training

programs to enhance safety for the high volumes of on-demand operations that occur

there. For example, the "Circle of Safety" education initiative targets aviation

consumers, to remind them that they too play a role in aviation safety. The initiative

encourages consumers to ask questions and have a better understanding of carriers they

choose to fly with and to recognize that their pressure on a pilot to get to a destination can

influence the safety of the flight.

Also, working with the Medallion Foundation, a non-profit organization promoting

aviation safety in Alaska, the FAA developed visual cue-based training for air tour

operators in Southeast Alaska to enhance pilots' understanding of and ability to recognize

weather minimums and escape options. Through simulator training, the operator is able

to tailor the training to the unique weather and terrain characteristics of the region. Cue-

based training is being developed for other parts of Alaska as well as for air tour

operators in Hawaii and New York, specific to the weather and terrain of those regions.

Safety improvements in air tour operations have also been made through regulation. The

National Air Tour Safety Standards rule includes requirements that pilots complete

helicopter performance plans. Since slow, low altitude operations are common in the air

tour industry, performance plans identify the sufficient airspeed and height above the

surface at which an aircraft must be operated so that pilots can safely land their aircraft in

the event of an engine failure.   This rule also prescribes specialized operating requirements for air tours in Hawaii and for over water operations. Since the implementation of the air tour rule in February 2007, there have been no accidents attributable to an air tour operator.

Despite the overall improvement in the safety of on-demand operations, there were spikes in fatal helicopter air ambulance accidents in 2004 and again in 2008. Between 2004 and 2008, we created a joint task force with industry to formulate and implement several voluntary safety initiatives, we issued multiple notices, bulletins, advisory circulars and the like to provide guidance to the industry to improve operational safety and promote a proactive safety culture among operators and we established a special committee to develop voluntary Helicopter Terrain Awareness and Warning System (HTAWS) standards. Because of these safety initiatives, the period from 2004 through 2007 showed a drastic reduction in helicopter air medical transport fatal accidents. However, the upward trend in 2008 prompted a more aggressive response. To this end, we are working on developing a draft Notice of Proposed Rulemaking (NPRM) to address several aspects of air ambulance operations. In addition, the FAA is proposing to amend regulations pertaining to all commercial helicopter operations conducted under part 135 to include equipment requirements, pilot training, and alternate airport weather minima. The intention of proposals under development would be to provide certificate holders and pilots with additional tools and procedures that will aid in preventing accidents and to address National Transportation Safety Board (NTSB), Aviation Rulemaking Committee, and internal FAA recommendations.

The history of on-demand operations shows that the accident rates have been trending downward.   In addition to targeted safety initiatives, technical advances such as Global Positioning System (GPS), Glass Cockpit and Electronic Flight Bag technology have led to much more reliable aircraft and contributed to the improvements in aviation safety, as evidenced by a sharp decrease in controlled flight into terrain (CFIT) and loss of control in flight. Over the past ten years, the number of on-demand fatal accidents due to CFIT has dropped by more than 60 percent and the number of fatal accidents due to loss of control in flight has dropped by more than half. Notably, while the overall accident rate for on-demand operations is higher than for scheduled part 121 operations, it is at an all-time low, having dropped from 2.36 accidents per 100,000 flight hours to 1.23 accidents. The fatal accident rate has improved by an even greater proportion - evidence that our work has been effective.

In conclusion, I want to reemphasize that on-demand operators conduct a wide variety of commercial operations, meeting diverse needs throughout the country. In some instances, it is appropriate to implement oversight practices or safety requirements for all on-demand operators. However, simply grouping on-demand operations together in order to assess risk does not take into account the true nature of on-demand operations and does not allow for an effective safety response to the risks of each type of on-demand operation.

Mr. Chairman, Congressman Petri, Members of the Subcommittee, this concludes my prepared testimony. I would be happy to answer any questions you have.